

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: LILY POND	Lake Area (ha): 1.21
Town: ALSTEAD	Maximum depth (m): 8.9
County: Cheshire	Mean depth (m): 3.7
River Basin: Connecticut	Volume (m ³): 44500
Latitude: 43°05'30" N	Relative depth: 7.1
Longitude: 72°15'50" W	Shore configuration: 1.28
Elevation (ft): 1509	Areal water load (m/yr): 14.96
Shore length (m): 500	Flushing rate (yr ⁻¹): 4.10
Watershed area (ha): 37.5	P retention coeff.: 0.51
% watershed ponded: 0.0	Lake type: natural

BIOLOGICAL:

28 January 1992

21 August 1991

DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBYRON 85%	DINOBYRON 45%
	#2	MOUGEOTIA 15%	FILAM. GREEN SPP. 35%
	#3		(ALL ALGAE SPARSE)
PHYTOPLANKTON ABUNDANCE (cells/mL)			
CHLOROPHYLL-A (µg/L)			2.32
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 87%	NAUPLIUS LARVAE 45%
	#2		CYCLOPOID COPEPODS 35%
	#3		
ROTIFERS/LITER		22	3
MICROCRUSTACEA/LITER		1	28
ZOOPLANKTON ABUNDANCE (#/L)		23	31
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			7.0
BOTTOM DISSOLVED OXYGEN (mg/L)		11.0	0.0
BACTERIA (fecal col., #/100 ml) #1			1
	#2		1
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³) : None
Anoxic volume (m³) : 300

CHEMICAL:

Lake: LILY POND

Town: ALSTEAD

	28 January 1992		21 August 1991		
DEPTH (m)	3.0	6.0	4.0		8.0
pH (units)	5.2	5.0	5.0		5.0
A.N.C. (Alkalinity)	0.4	0.1	-0.2		-0.2
NITRATE NITROGEN	< 0.02	< 0.02	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN					
TOTAL PHOSPHORUS	<0.001	0.002	0.015		0.004
CONDUCTIVITY (μ mhos/cm)	26.0	26.0	23.9		23.6
APPARENT COLOR (cpu)	< 5	< 5	< 5		24
MAGNESIUM			0.38		
CALCIUM			1.3		
SODIUM			< 1.0		
POTASSIUM			< 0.40		
CHLORIDE	< 3	< 3	< 2		< 2
SULFATE	7	7	6		7
TN : TP					
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1991

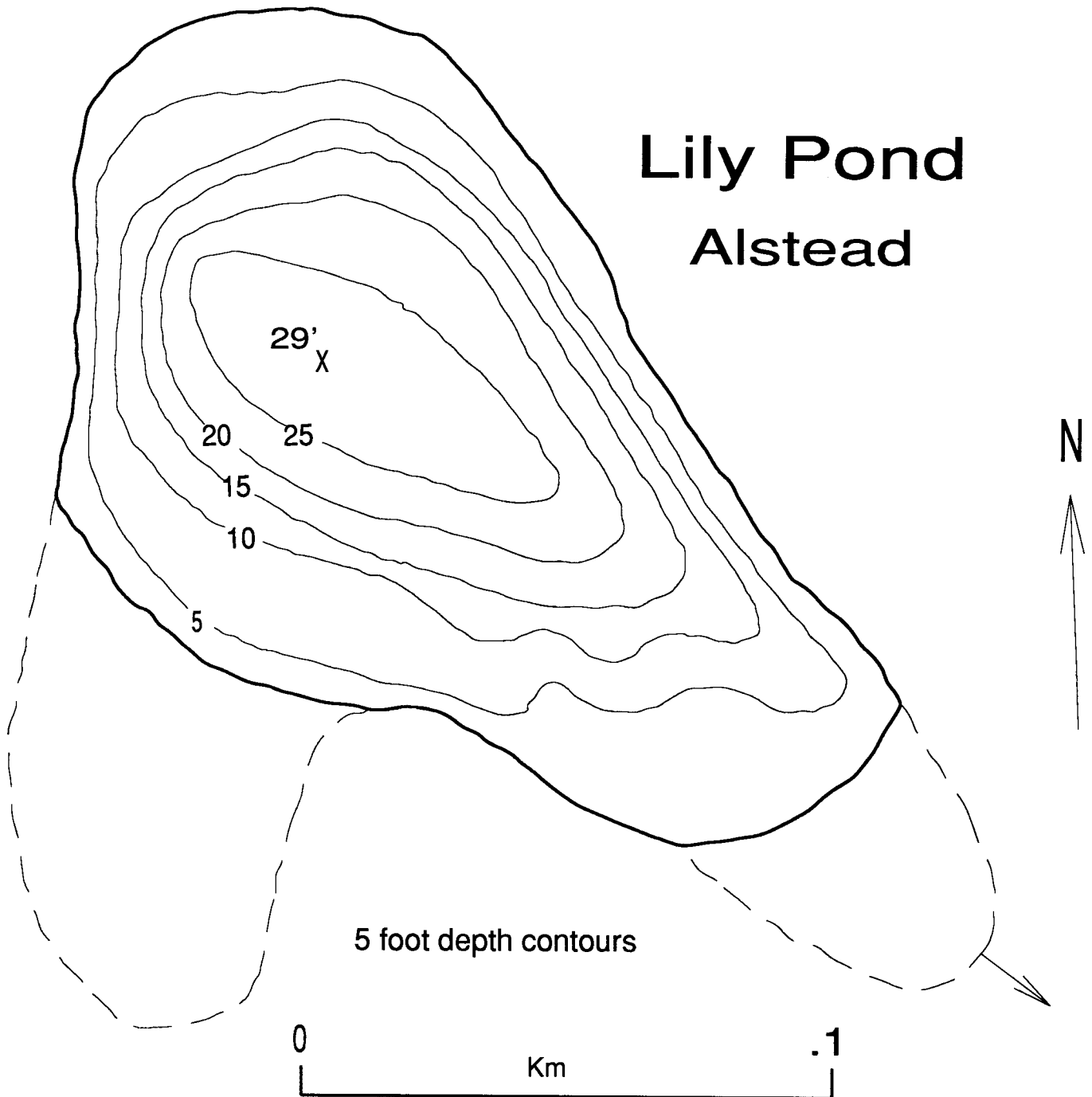
D.O. S.D. PLANT CHL TOTAL CLASS

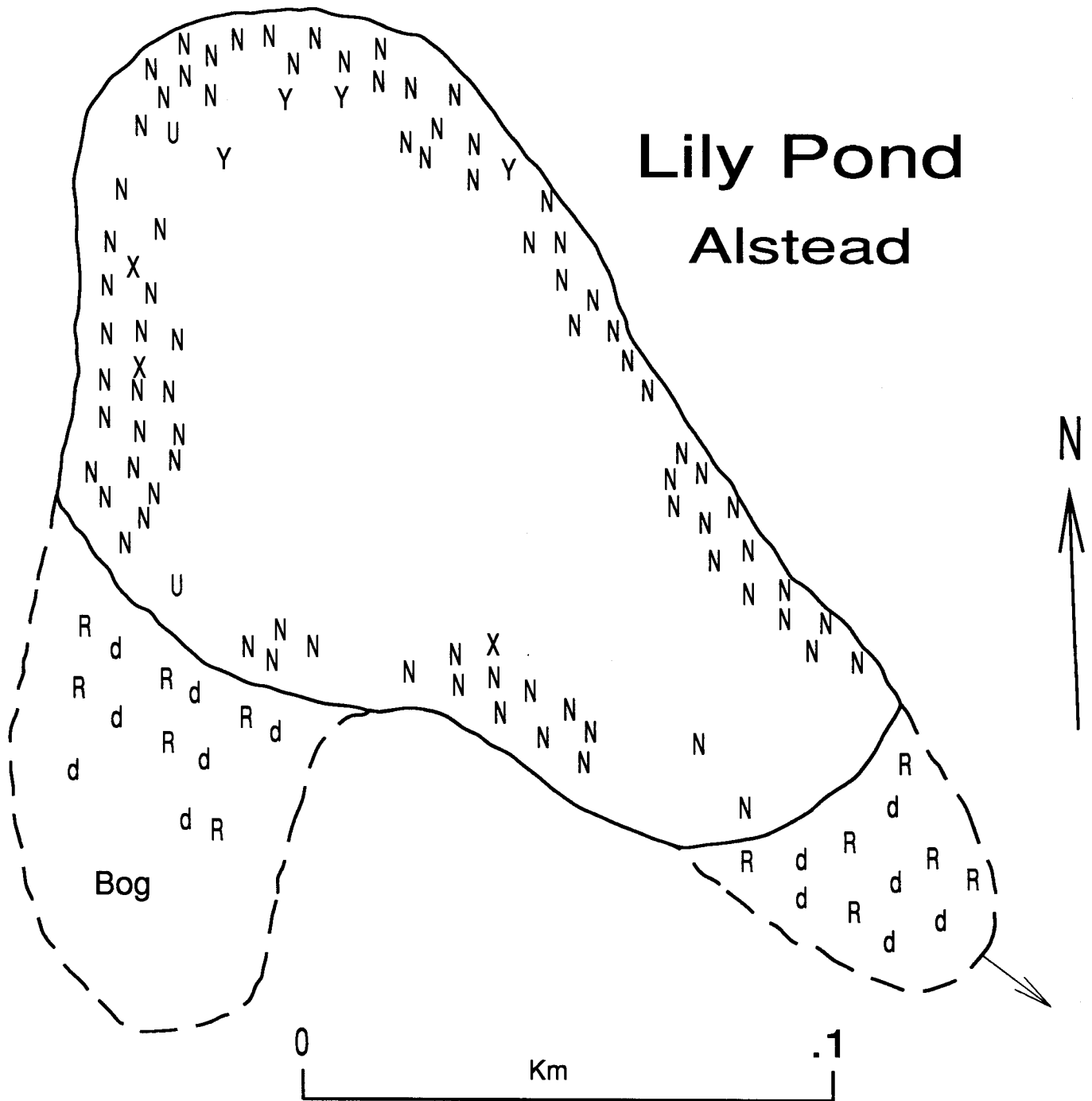
**	1	3	0	4	Oligo.
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COMMENTS:

1. There are two Lily Ponds in the Town of Alstead: one in the southwest quadrant of the town and one in the southeast quadrant. The pond sampled here lies in the southeast quadrant, south of Smith Hill and northeast of Kidders Pond. A muscovite (mica) mine was located upstream of the pond on Smith Hill. The pond water was analyzed for aluminum; it was .133 mg/L (it is typically less than .05 mg/L in most ponds).
2. This is a remote pond sampled cooperatively with the Fish and Game Department.
3. No wholewater plankton analysis.

Lily Pond Alstead





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